Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the BioPreferred Program. This summary reflects data available as of November 30, 2007.

Title: Concrete and Asphalt Cleaners

Description: Chemicals used in concrete etching as well as to remove petroleum-based soils, lubricants, paints, mastics, organic soils, rust, and dirt from concrete, asphalt, stone and other hard porous surfaces. Products within this item include only those marketed for use in commercial or residential construction or industrial applications.

Companies Supplying Item: 29 companies supplying Concrete and Asphalt Cleaners have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies supplying Concrete and Asphalt Cleaners:

- United Soybean Board
- Cement Association of Canada
- National Ready Mixed Concrete Association
- Iowa Soybean Association
- Mastic Asphalt Council

Commercially Available Products Identified: Of the companies identified, 34 Concrete and Asphalt Cleaners are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 9 Concrete and Asphalt Cleaners.

Industry Performance Standards: Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

- Boeing Boeing Spec D6-17487P For Aircraft Exterior and General Cleaning
- ASTM International D3505 Standard Test Method for Density or Relative Density of Pure Liquid Chemicals
- ASTM International E70 Standard Test Method for pH of Aqueous Solutions With the Glass Electrode
- Environmental Protection Agency 560/6-82-003 Describes methods for performing testing of chemical substances under the Toxic Substances Control Act
- Environmental Protection Agency 601 Purgeable Halocarbons
- Environmental Protection Agency 602 Purgeable Aromatics

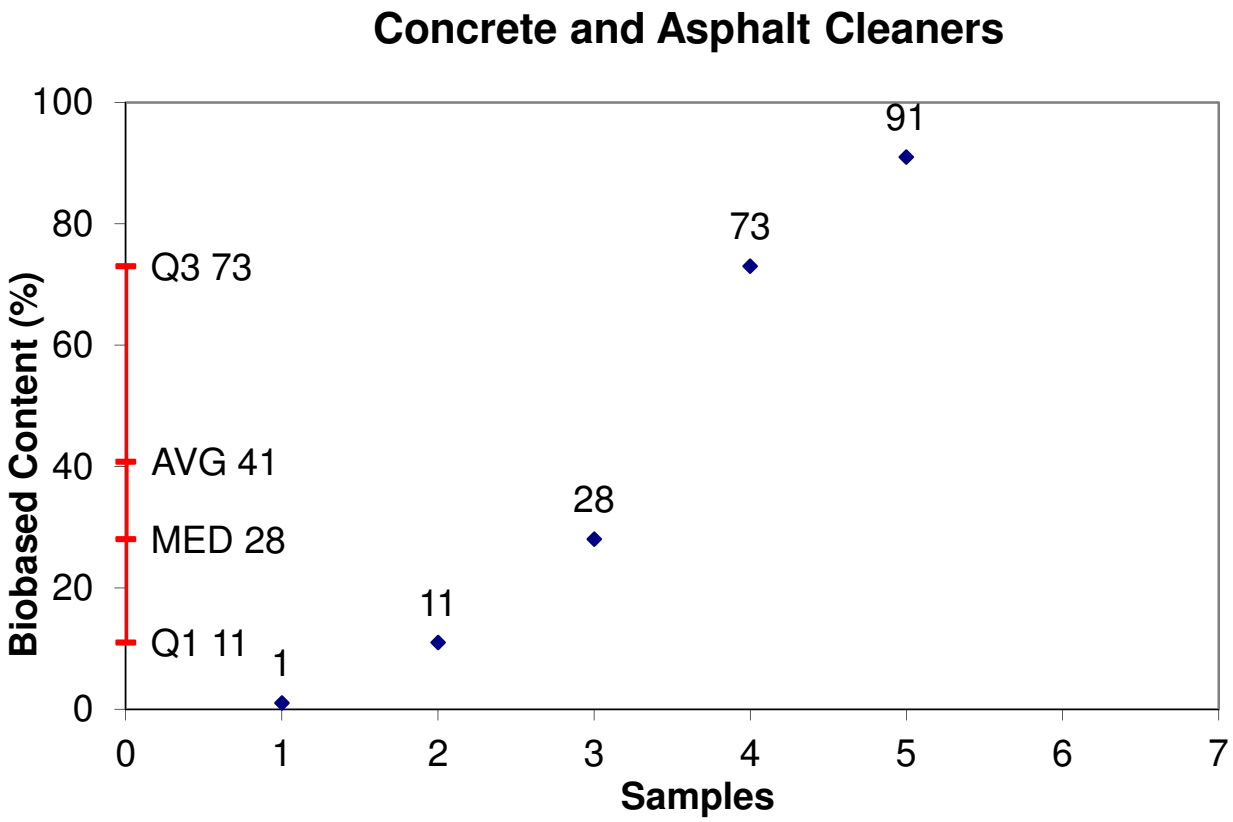
Samples Tested for Biobased Content: 5 samples of Concrete and Asphalt Cleaners have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

Biobased Content Data: Results from biobased content testing of Concrete and Asphalt Cleaners indicate a range of content percentages from 1% minimum to 91% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 1 Concrete and Asphalt Cleaners have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Concrete and Asphalt Cleaners range from $7.98 minimum to $7.98 maximum per usage unit. The environmental scores range from 0.0124 minimum to 0.0124 maximum. A detailed summary of the BEES results is included as Appendix B.

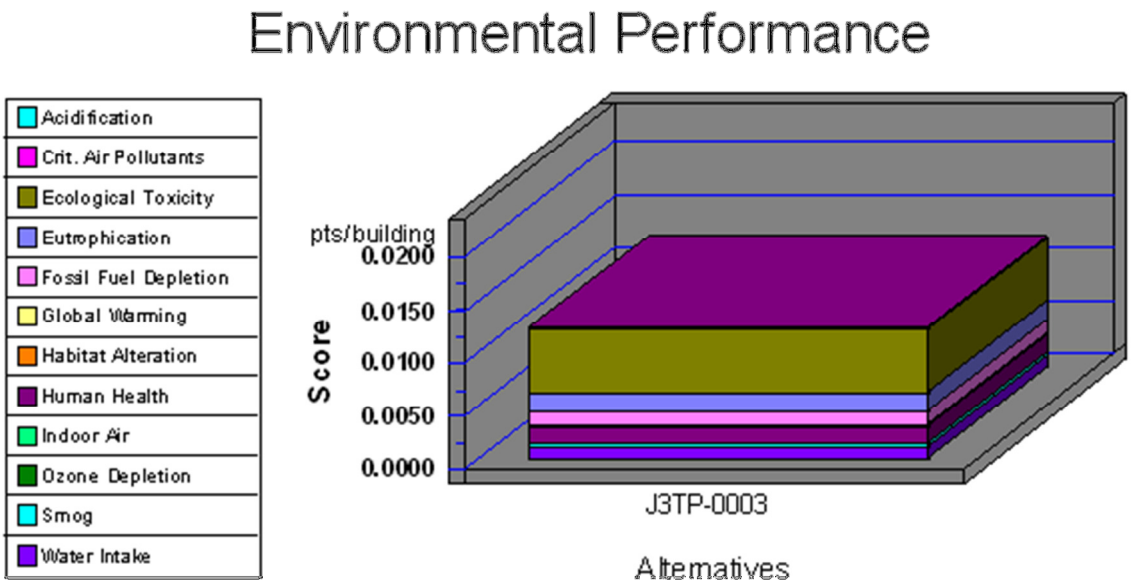
Appendix A - Biobased Content Data



	Company	Product	C14	BEES
1	X3UX	X3UX-0003	1	
2	BNK2	BNK2-0001	11	
3	C4T6	C4T6-0006	28	
4	U4WQ	U4WQ-0007	73	
5	J3TP	J3TP-0003	91	Yes

Appendix B - BEES Analysis Results

Functional Unit: 1 gallon



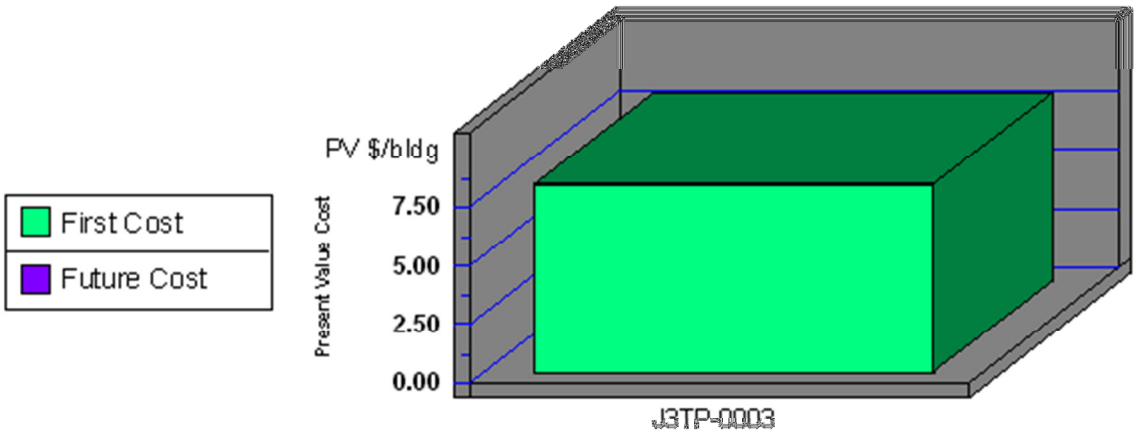
Note: Lower values are better

Category	J3TP-0003
Acidification--3%	0.0000
Crit. Air Pollutants--9%	0.0001
Ecolog. Toxicity--7%	0.0060
Eutrophication--6%	0.0017
Fossil Fuel Depl.--10%	0.0013
Global Warming--29%	0.0002
Habitat Alteration--6%	0.0000
Human Health--13%	0.0015
Indoor Air--3%	0.0000
Ozone Depletion--2%	0.0000
Smog--4%	0.0004
Water Intake--8%	0.0012
Sum	0.0124

Concrete and Asphalt Cleaners		
Impacts	Units	J3TP-0003
Acidification	millimoles H^+ equivalents	8.15E+02
Criteria Air Polutants	microDALYs	2.06E-01
Ecotoxicity	g 2,4-D equivalents	7.00E+01
Eutrophication	g N equivalents	5.56E+00
Fossil Fuel Depletion	MJ surplus energy	4.68E+00
Global Warming	g CO_2 equivalents	2.04E+02
Habitat Alteration	T&E count	0.00E+00
Human Health--Cancer	g C_6H_6 equivalents	9.77E-01
Human Health--NonCancer	g C_7H_8 equivalents	1.22E+03
Indoor Air Quality	g TVOCs	0.00E+00
Ozone Depletion	g CFC-11 equivalents	3.89E-05
Smog	g NO_x equivalents	1.39E+01
Water Intake	liters of water	7.77E+01
Functional Unit	----------	1 gallon

1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count;Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.

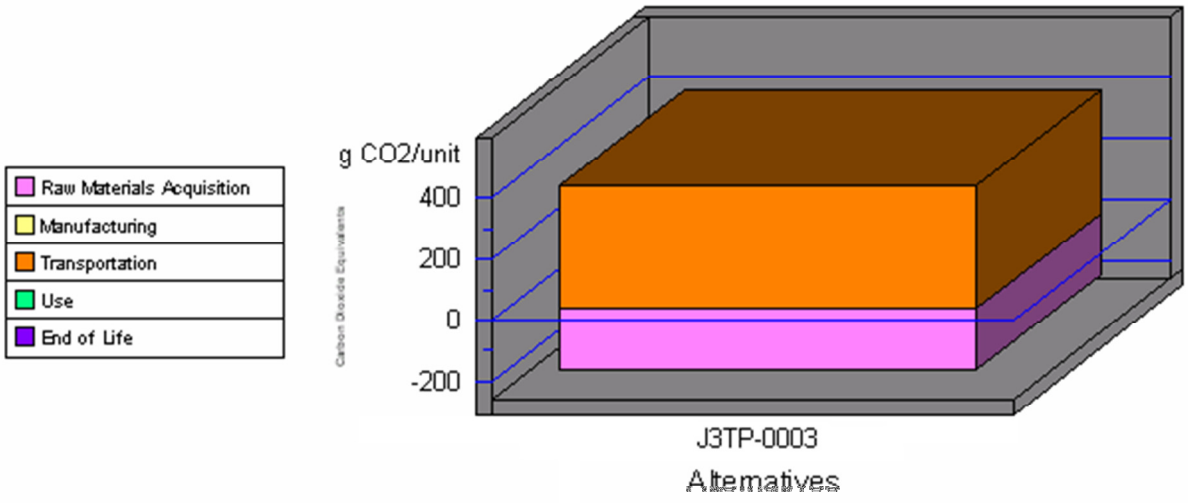
Economic Performance



Category	J3TP-0003
First Cost	7.98
Future Cost– 3.0%	0.00
Sum	7.98

*This is a consumable product. Therefore, future costs are not calculated.

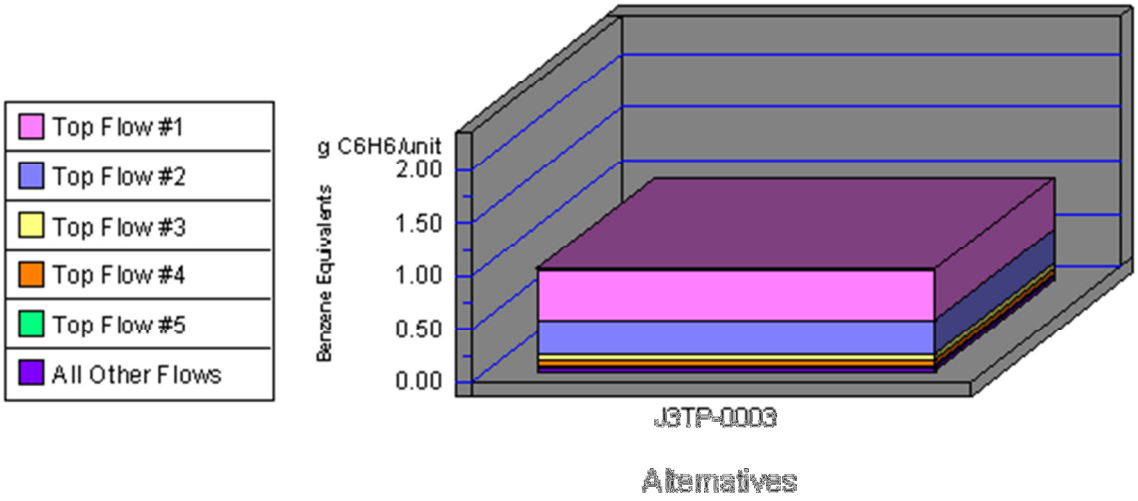
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	J3TP-0003
1. Raw Materials	-201
2. Manufacturing	4
3. Transportation	401
4. Use	0
5. End of Life	0
Sum	204

Human Health Cancer by Sorted Flows*

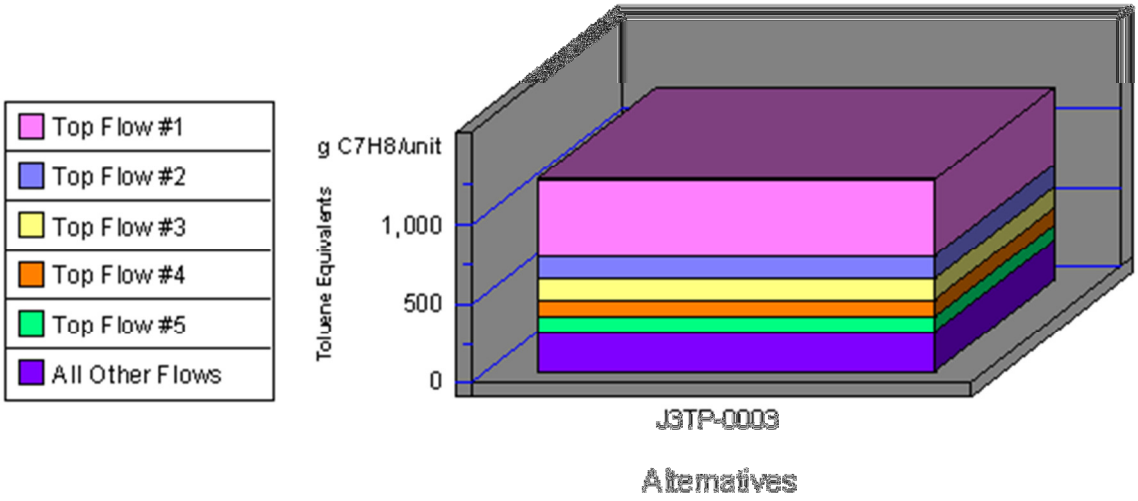


Note: Lower values are better

Category	J3TP-0003
Cancer--(w) Arsenic (As3+, As5+	0.48
Cancer--(w) Phenol (C6H5OH)	0.32
Cancer--(a) Arsenic (As)	0.05
Cancer--(a) Dioxins (unspecifie	0.05
Cancer--(a) Benzene (C6H6)	0.02
All Others	0.05
Sum	0.98

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	J3TP-0003
Noncancer--(a) Mercury (Hg)	480.00
Noncancer--(a) Lead (Pb)	148.85
Noncancer--(w) Barium (Ba++)	122.93
Noncancer--(a) Cadmium (Cd)	110.98
Noncancer--(w) Lead (Pb++, Pb4+	99.48
All Others	255.86
Sum	1,217.09

*Sorted by five topmost flows for worst-scoring product